We Claim:

1   1.   A method of scaling digital video information, said method
2   comprising:
3   accepting a scaling relaxation value, said scaling relaxation value specifying an
4   amount to relax a scaling performed to prevent buffer underflow or overflow;
5   and
6   adjusting a scaling value with said scaling relaxation value.

1   2.   The method of scaling digital video information as claimed in
2   claim 1, said method further comprising:
3   calculating said scaling value, said scaling value dependent on a current buffer
4   usage.

1   3.   The method of scaling digital video information as claimed in
2   claim 1 wherein said adjusting a scaling with said scaling relaxation value comprises
3   adding said scaling relaxation value to said scaling value and subtracting the product of
4   said scaling value and said scaling relaxation value.

1   4.   The method of scaling digital video information as claimed in
2   claim 2 wherein said adjusting a scaling of a bit budget with said scaling relaxation value

3   comprises adding said scaling relaxation value to said scaling value and subtracting the

4   product of said scaling value and said scaling relaxation value.

1   5.   A method of tracking digital video information complexity, said

2   method comprising:

3   determining a complexity measure for a current digital video picture; and

4   combining said complexity measure for said current digital video picture to a

5   running average complexity measure for a series of digital video pictures in a

6   manner that prevents said current digital video picture from significant

7   changing said running average complexity measure for a series of digital video

8   pictures .

1   6.   The method of tracking digital video information complexity as

2   claimed in claim 5 wherein said running average complexity is not allowed to change by

3   more than a predetermined percentage.

1   7.   The method of tracking digital video information complexity as

2   claimed in claim 5 wherein said running average complexity is processed by a non-linear

3   smoothing filter.

1   8.   A computer-readable medium comprising a set of computer

2 instructions for implementing a method of scaling digital video information, said set of

3 computer instructions performing:

4   accepting a scaling relaxation value, said scaling relaxation value specifying an

5   amount to relax a scaling performed to prevent buffer underflow or overflow;

6   and

7   adjusting a scaling value with said scaling relaxation value.

1   9.   The computer-readable medium as claimed in claim 8 wherein said

2 set of computer instructions further perform:

3   calculating said scaling value, said scaling value dependent on a current buffer

4   usage.

1   10.   The computer-readable medium as claimed in claim 8 wherein said

2 adjusting a scaling with said scaling relaxation value comprises adding said scaling

3 relaxation value to said scaling value and subtracting the product of said scaling value

4 and said scaling relaxation value.

1   11.   The computer-readable medium as claimed in claim 9 wherein said

2 adjusting a scaling of a bit budget with said scaling relaxation value comprises adding

3 said scaling relaxation value to said scaling value and subtracting the product of said

4 scaling value and said scaling relaxation value.

1   12. A computer-readable medium comprising a set of computer

2 instructions for tracking digital video information complexity, said set of computer

3 instructions performing:

4   determining a complexity measure for a current digital video picture; and

5   combining said complexity measure for said current digital video picture to a

6   running average complexity measure for a series of digital video pictures in a

7   manner that prevents said current digital video picture from significant

8   changing said running average complexity measure for a series of digital video

9   pictures .

1   13. The computer-readable medium as claimed in claim 12 wherein

2 said running average complexity is not allowed to change by more than a predetermined

3 percentage.

1   14. The computer-readable medium as claimed in claim 12 wherein

2 said running average complexity is processed by a non-linear smoothing filter.